

WHAT IS CLAIMED IS:

1. A resistor apparatus comprising:

a first and second lead wire, and a resistor body;

the resistor body comprising a resistor core;

5 the first lead wire being electrically attached to a first end of the resistor core, and the second lead wire being electrically attached to a second end of the resistor core; and

10 a gas permeable substantially tubular containment casing substantially enclosing the resistor body and having sufficient tensile strength and temperature resistance to contain broken pieces of an overheated resistor body while permitting the escape of gas thereby avoiding a substantial pressure build-up within the casing.

2. The apparatus of claim 1, wherein the casing comprises woven fiberglass.

15 3. The apparatus of claim 1, wherein the casing comprises woven ceramic fiber

4. The apparatus of claim 1, wherein the casing is ceramic.

5. The apparatus of claim 1, wherein the casing is substantially rigid.

6. The apparatus of claim 1, wherein the casing is substantially flexible.

7. The apparatus of claim 1, wherein the temperature resistance is at least 100°C.

8. The apparatus of claim 1, wherein the temperature resistance is at least 80°C.

5 9. The apparatus of claim 1, further comprising fasteners for fixing respective ends of the casing to the lead wires, thereby preventing the casing from sliding relative to the resistor body.

10 10. The apparatus of claim 1, wherein the casing contains openings that allow gas to travel through the casing.

11. The apparatus of claim 1, wherein the resistor body further comprises an insulating layer substantially surrounding the resistor core.

12. The apparatus of claim 11, wherein the insulating layer is disposed directly against the resistor core.

13. The apparatus of claim 11, wherein the insulating layer is gas 15 impermeable.

14. A method for containing broken pieces of an overheated resistor body, the method comprising:

20 substantially surrounding the resistor body with a gas permeable substantially tubular containment casing having a tensile strength and temperature resistance capable of containing broken pieces of an overheated resistor body; and

fixing the gas permeable containment casing to at least one lead wire connected to the resistor body, thereby preventing the casing from sliding relative to the resistor body and maintaining the casing in a position substantially surrounding the resistor body.

5 15. The method of claim 14, further comprising the step of fixing first and second ends of the casing to respective lead wires connected to the resistor body.

10 16. The method of claim 14, wherein the casing is made by wrapping a woven fiberglass sheet in substantially surrounding relationship to the resistor body.

17. The method of claim 14, wherein the casing is made by wrapping a woven ceramic sheet in substantially surrounding relationship to the resistor body.

15 18. The method of claim 14, wherein the temperature resistance is at least 100°C.

19. The method of claim 14, wherein the temperature resistance is at least 80°C.